



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,550	07/28/2003	Masahiro Kito	YAO-4316US1	3578
23122	7590	08/13/2004	EXAMINER	
RATNERPRESTIA			LE, DUNG ANH	
P O BOX 980			ART UNIT	PAPER NUMBER
VALLEY FORGE, PA 19482-0980			2818	

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/628,550

Applicant(s)

KITO ET AL.

Examiner

DUNG A LE

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 14-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/521,512.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/28/2003.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claims 1- 13 have been cancelled.

Claims 13-23 are pending in this application.

Priority

Acknowledge is made of applicants' claim for foreign priority base on an application 11-059790 filed in Japan on 03/08/1999.

It is noted that Applicants have filled a certified copy of said application as required by U.S.C 119, which papers have been placed of record in the file.

It is noted that Applicants have not filled a certified copy of said application as required by U.S.C 119. The certified priority document was filed in the Patent Serial Number 6625189 on Aug 03, 1999.

Oath/Declaration

The oath/declaration filed on 7/28/2003 is acceptable.

Information Disclosure Statement

This office acknowledges of the following items from the Applicant:

Information Disclosure Statement (IDS) filed on 7/28/2003 and made of record. The references cited on the PTOL 1449 form have been considered.

Specification

The specification is objected to for the following reasons:

a) The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed (see MPEP § 606.01).

b) A new abstract is required that is clearly indicative the invention to which the claims are directed.

Note that, the claims are directed to a method of making a semiconductor device instead of to a semiconductor device.

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

Claim 23 is objected to because of the following informality:

Claim 23 is dependent on the cancelled claim 13.

Claim Rejections

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-23 are rejected under 35 USC 102 (b) as being anticipated by Kito et al. (EP 0 706 234 A2/IDS).

Kito et al. teaches a method for fabricating a semiconductor laser device comprising steps of:

forming a plurality of grooves 2 in a surface of an InP layer 17 (col. 3, lines 52- 59, col 16, line 13, fig. 10A) ;

thermally treating the InP layer in an atmosphere including at least a gas containing phosphorus (phosphine)and a gas containing arsenic in a mixed state, thereby forming a plurality of active regions 3 made of InAsP in the plurality of grooves. (col 3, line 59 to col 4, line 2; col 16, line 20 and fig. 10B)

Regarding claim 15, wherein each of the grooves 2 is formed in a triangle shape such that a bottom of the triangle is on a surface of the InP layer. (fig. 10C)

Regarding claim 16, wherein the InP layer 15 is an uppermost layer of a multi-layered structure. (fig. 10A)

Regarding claim 17, further comprising a step of forming a light confinement layer adjacent to the InP layer, wherein the light confinement layer made of a semiconductor having a bandgap energy between the bandgap energy of a semiconductor constituting the active regions between the InP substrate and the InP layer and the bandgap energy of InP. (col 4, lines 22- 30)

Regarding claim 18, wherein the step of thermally treating the InP layer includes a step of intermittently providing a gas containing arsenic, thereby forming a plurality of active regions each having a well layer 3 made of InAsP in the plurality of grooves (fig. 10C).

Regarding claim 19, wherein the step of thermally treating the InP layer includes a step of intermittently providing a gas containing arsenic, thereby forming a plurality of active regions each having a well layer 3 made of InAsP in the plurality of grooves (fig. 10C).

Art Unit: 2818

Regarding claim 20, comprising a step of forming a light confinement layer adjacent to the InP layer, wherein the light confinement layer made of a semiconductor having a bandgap energy between the bandgap energy of a semiconductor constituting the active regions between the InP substrate and the InP layer and the bandgap energy of InP. (col 4, lines 22- 30)

Regarding claim 21, wherein the light confinement layer 11 is made of InGaAsP. (col 16, line 34)

Regarding claim 22, wherein the light confinement layer 11 is made of InGaAsP. (col 16, line 34).

Regarding claim 23, wherein the plurality of grooves 3 have a periodic pattern in a direction parallel to a resonator length direction. (fig. 10C).

When responding to the office action, Applicants' are advice to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond

Art Unit: 2818

within the period for response will cause the application to become abandoned

(see M.P.E.P 710.02(b)).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung A. Le whose telephone number is (571) 272-1784. The examiner can normally be reached on Monday-Tuesday and Thursday 6:00am-4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DUNG A. LE
Primary Examiner
Art Unit 2818

